

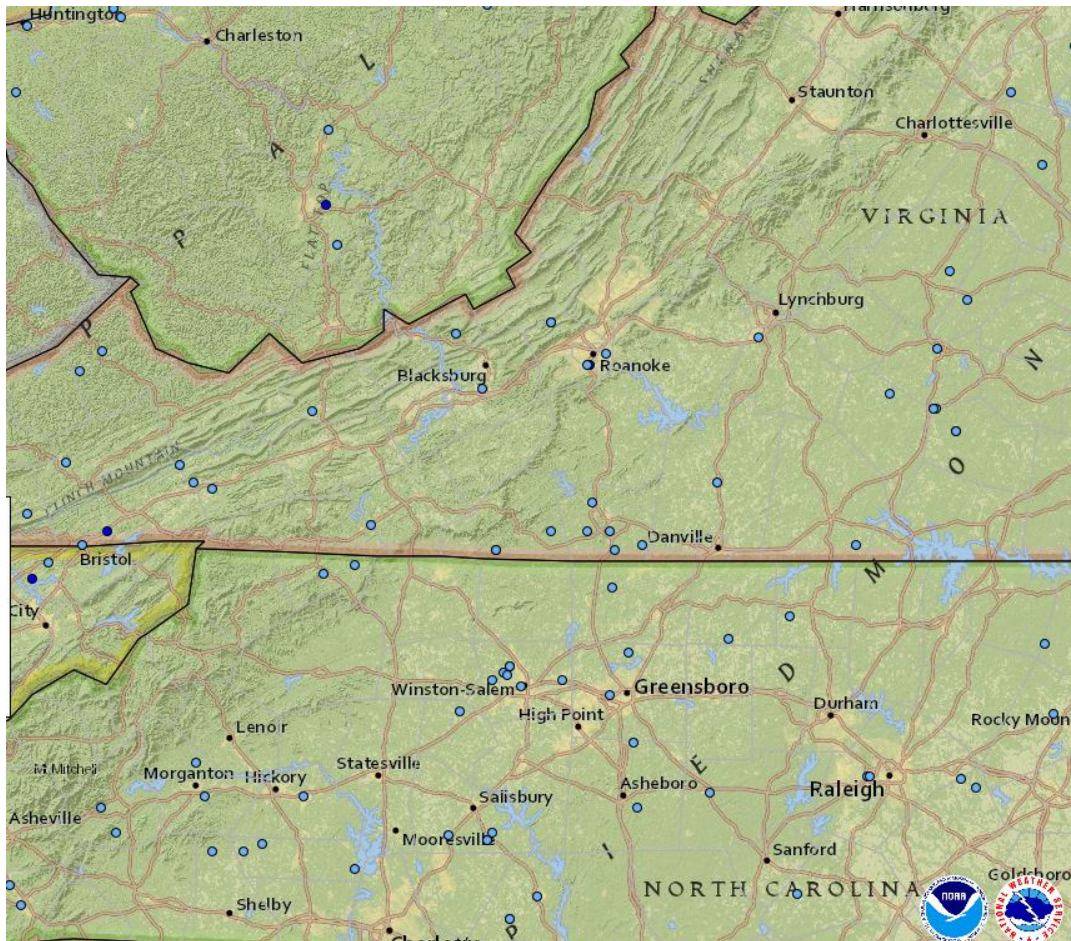
# Top 5 Weather Events in 2020

As voted by the staff of NWS Blacksburg

## #5: January 11<sup>th</sup>, 2020 Severe Thunderstorms

A strong spring-like cold front moved east across the area with severe thunderstorms and flash flooding. Storms associated with this front brought numerous trees down in Smyth and Surry Counties. Flash flooding in northwest North Carolina damaged numerous roads along the Watauga River in Watauga County.

The National Weather Service in Blacksburg issued 12 Severe Thunderstorm Warnings for this event. Since 1986, the only other time this many Severe Thunderstorm Warnings we issued in January was on January 19<sup>th</sup>, 1996. This was the earliest in the calendar year NWS Blacksburg issued a Severe Thunderstorm Warning since January 1<sup>st</sup>, 2007.



Reports of Damaging Winds from Thunderstorms on the Evening of January 11<sup>th</sup>, 2020

#### **#4: February 5-7, 2020 Flooding**

Numerous NWS volunteer observing stations reported record one-day February rainfall amounts ending on the morning of February 6th and/or the 7th and numerous two-day all-time February records were also set. The heaviest rains fell during the 24-hour period ending 7 AM February 7<sup>th</sup>. Among the all-time February daily records were Boone 1 SE with 4.35" (old record 3.91" in 1984), Danbury 4.06" (old record 2.27" in 1996), Chatham 3.95" (old record 2.61" in 1984), Eden 3.93" (old record 2.25" in 1984) and Yadkinville 3.91" (old record 2.53" in 1972).

Flooding was widespread across the NWS Blacksburg forecast area with dozens of stream gages rising above flood stage, some to notable levels. This included the USGS gage on the Dan River near Wentworth, which crested at 28.39 feet. It was the highest stage since Hurricane Agnes in June 1972 (31.60 feet) and 2nd highest since records began in 1940. The Dan River also crested at 27.21 feet in Danville, the 3<sup>rd</sup> highest level since the gage was moved to the current location in 1996. Several structures saw flooding in Danville and roads closed in and around Danville were flooded.

Some flash flooding occurred early during the event as higher rates of rainfall were embedded within the overall rain pattern. Numerous rivers and streams flooded, some reaching crests in the 25- to 50-year flood recurrence interval, and many roads were flooded with significant damage to some infrastructures. There was well over \$1 million dollars in damage to roads alone in northwest NC.

The greatest flood impacts occurred along the Clinch River in Tazewell County, VA where the Richlands gage crested at 14.33 feet, which was the 9th highest on record and the highest stage since November, 2003. Flooding along lowland areas was extensive from Cedar Bluff downstream through Richlands and into the Doran and Raven communities. There were numerous evacuations conducted and homes and businesses flooded along with numerous roads flooded and some damaged. Damage estimates for Tazewell County were around \$1.65 million.



**Flooding in Richlands, VA. Photo from Peter Forister.**

### **#3: Tropical Storm Zeta (October 29, 2020)**

During the early morning hours of the 29<sup>th</sup>, Tropical Storm Zeta, caught in a strong wind flow aloft, was pushed rapidly northeast from the Louisiana coast. The storm brought with it extremely deep tropical moisture. Though Zeta passed quickly across our area, within an 8-hour period, widespread 3" to 4" rainfall amounts fell from the Blue Ridge and foothills of northwest North Carolina through the Piedmont of central Virginia. In many cases, these amounts fell inside a two-hour period, with sustained rainfall rates of 2"-3" per hour. Numerous reports of flash flooding and trees down were received. Over 100 trees were blown down throughout Pittsylvania County and the city of Danville, with at least one tree falling on a house in Danville. In Rockingham County, NC, approximately 100 tree damage reports were received in addition to a report of a roof being blown off. About 40 homes in Rockingham County were reported to have suffered damage from a fallen trees.

The majority of flooding occurred along smaller creeks and streams in northwest North Carolina, particularly in Wilkes County, where several roads were either temporarily cut off by flood waters, or completely washed out.

The NWS Blacksburg office issued a Tropical Storm Warning for a portion of the region, which was the first tropical headline ever issued by our office.



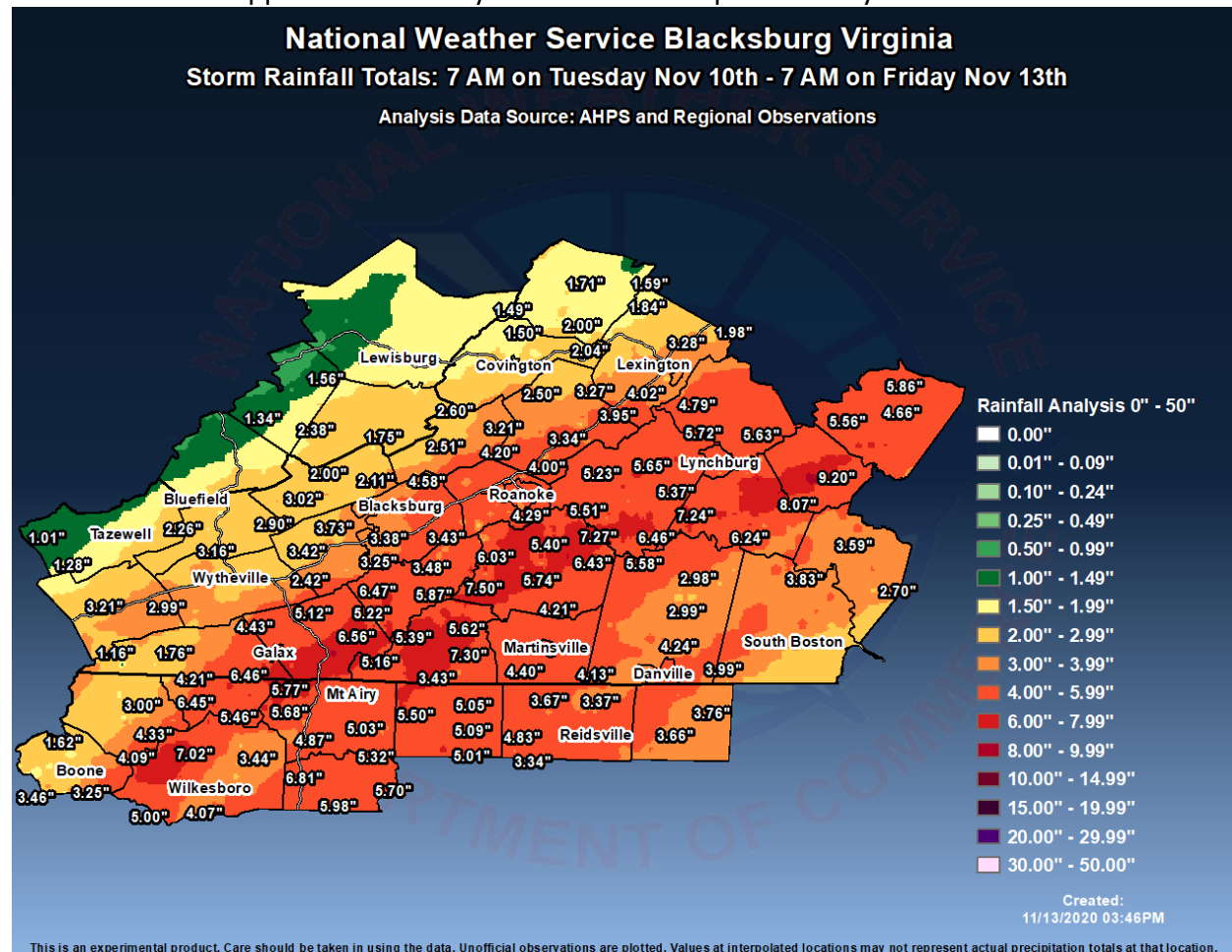
Fishing Creek Arbor Road in Wilkes County. Photo from Wilkes Weather and Breaking News.

## #2: November 11-12, 2020 Flooding

A prolonged period of showers and thunderstorms, associated with moisture from tropical cyclone Eta, fell over a two to three day period resulted in historic rainfall totals for some locations in southwest and central Virginia.

The 9.20" of rain measured at Appomattox over a three day period (ending 7 AM November 13<sup>th</sup>) was the 4th highest three day total EVER (records back to 1937). Stuart recorded 7.30" over the same three day period, which was the 6th highest three day total ever (records back to 1913). 5.76" at Galax was the greatest 3-day total ever for the month of November. The greatest 3-day total ever was also recorded at Rocky Mount (6.04") where weather records date back to 1894; as well as Huddleston, VA. In Lynchburg, 4.64" of rain was measured over a 2-day period which was the greatest 2 day total in November on record (records for Lynchburg date back to 1893)

Flash flooding and flooding was widespread across many Piedmont counties with at least five water rescues in Appomattox County and some in Campbell County.



## **#1: May 21-22, 2020 Flooding**

Four-day (96-hour) rainfall amounts ending at 800 AM EDT on May 22nd ranged from 3 to over 12" in the most favored locations. Some of the 11-inch+, 4-day rain totals in Roanoke County were within the 200-year recurrence interval (9.78" to 11.8").

The flooding that ensued was almost all in the form of river flooding that took several days to develop. Nearly every major river basin saw some flooding, but the most notable occurred in the New River basin where crests ranged from the 4th to 8th highest on record at the Virginia gaging stations along the river. Stages on the upper New were higher than in October 2018 when the remains of Hurricane Michael transited the region.

At Galax, it was the highest stage in 25 years, since January 1995 when the river hit 15.23 feet. At Ivanhoe, it was the highest stage in over 40 years, since November, 1977 when the gage reached 28.08 feet. The incredible rainfall, runoff and numerous debris flows produced widespread damage to roads in the region with VDOT reporting over \$5 million in damages.

Of note as well during this period was that Philpott Dam on the Smith River which was completed by the U.S. Army Corps of Engineers in 1952 reached the highest pool elevation in its period of record, reaching 985.31 feet on May 22nd. This was the first time the emergency spillway elevation of 985 feet had been reached. The previous high lake level was 983.06 feet in June 1972 during Hurricane Agnes.



Flooding Along the Roanoke River in Roanoke. Photo from Taj Simmons.